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Description of *Acupalpus orszuliki* nov.sp. (Coleoptera, Carabidae, Harpalini, Stenolophina) and faunistic notes on some species previously described

David W. WRASE & Bernd JAEGER

A b s t r a c t : Description of *Acupalpus orszuliki* nov.sp. (type locality: Hop Geçidi, Mardin env., Mardin prov., Turkey). Illustrations of the habitus, head, pronotum, and the median lobe of the male genitalia including its internal sac are presented, and comparisons are made with related species. Three species are mentioned with first records: *Stenolophus (Egadroma) pseudoobockianus* FELIX & MUILWIJK, 2009 for Iran, *Stenolophus* (s.str.) *steveni* KRYNICKY, 1832 for Greece, and *Anthracus quarnerensis* (REITTER, 1884) for Lebanon. Additional location data are given for *Acupalpus (Ancylostria) morulus* REITTER, 1884 (Lebanon, Turkey).

K e y w o r d s : Coleoptera, Carabidae, Harpalini, Stenolophina, *Acupalpus*, new species, new records, Greece, Iran, Lebanon, Syria, Turkey.

Introduction

The *Acupalpus* fauna of the Near and Middle East has been rather intensively studied in the past 30 years (JAEGER 1987, 1989, 1992, 1999, 2011b, WRASE 2009).

According to JAEGER & KATAEV (2003) and JAEGER (2011b) 16 species have been recorded for this region to date, with 14 species belonging to subgenus *Acupalpus* LATREILLE, 1829 and two to subgenus *Ancylostria* SCHAUBERGER, 1930. Recent collecting in Turkey and Syria has led to the unexpected discovery of a further species of subgenus *Acupalpus* new to science which description is the subject of this short paper. Additionally, we provide new distribution data for some species of the genera *Stenolophus*, *Acupalpus* and *Anthracus*.

Methods

Measurements were made at a magnification of 50 times (body and elytral length) and 70 times (other body parts) using an ocular micrometer attached to a Nikon SMZ 1500 stereobinocular microscope. Total body length is measured from apical margin of labrum to the apex of the left elytron as the maximum linear distance, and the width of the head as the maximum linear distance across the head, including the compound eyes; the length of the pronotum from the anterior to the posterior margin along the midline; the length of the elytra from the anterior margin of shoulder to the apex of the left elytron as the

maximum linear distance; the width of the pronotum and elytra at their broadest point.

Microsculpture was examined at a magnification of 100x.

Images were prepared using equipment, software and methods described in JAEGER (2012).

Dissections were made with standard techniques; genitalia were preserved in Euparal on acetate labels, and pinned beneath the specimens from which they had been removed.

Labels of type specimens were cited as originally given, and different lines are separated by a forward slash (/).

Most of main distinctive characters for genus and subgenus *Acupalpus* in general are not repeated in the description, and it is only referred to characters important for discrimination.

Material

The following abbreviations are used for the depositories of the examined material:

MFNBMuseum für Naturkunde Berlin, Germany, J. Frisch
 NMBE.....Naturhistorisches Museum der Burgergemeinde Bern, Switzerland, Ch. Huber
 NMPNarodny Muzeum v Praze, Prague, Czech Republic, J. Hájek
 cJAEG Coll. B. Jaeger, Berlin, Germany
 cORSZ Coll. K. Orszulik, Frýdec-Místek, Czech Republic
 cMUILW Coll. J. Muilwijk, De Bilt, Netherlands
 cREUT Coll. Chr. Reuter, Hamburg, Germany
 cWR Coll. D.W. Wrase, Berlin, Germany (in Zoologische Staatssammlung München)

Results

Acupalpus (s.str.) *orszuliki* nov.sp. (Figs 1-6)

Type material: Holotype ♂: "TURKEY prov. Mardin / Hop Gecidi, Mardin env. / 11.-14.5.2005 / lgt. Orszulik" (cWR). Paratypes: 1 ♀, same data as holotype (cORSZ). 1 ♂: "TR, Hatay, 15 km WSW / Antakya, Batiayaz, / bottom of Musa Dağ, / ~ 500 m, 6.-23. IV.2014/ pitfall, leg. C. Reuter" (cWR). 1 ♂, 1 ♀: "SYRIA, Homs env. / 10km N Crac de Chev. / Mashta Al Hilv / lgt. Orszulik 25.4.2011" (cJAEG, cORSZ).

E t y m o l o g y : Latinized patronym based on the surname of our estimated colleague Kamil Orszulik (Frýdec-Místek, Czech Republic), who collected the species at first, and whose indefatigable efforts in the field contributed substantial numbers of Carabid beetles, very interesting or new to science.

D i a g n o s i s : A small *Acupalpus* species belonging to subgenus *Acupalpus* with surface reddish brown and with legs yellowish red, antennomeres partly infuscated.

D e s c r i p t i o n : General appearance as figured (Fig. 1). Body length 2.9-3.3 mm (mean 3.1, holotype 3.0 mm).

Colour: Head dark reddish brown, clypeus, labrum, and mandibles (except apices) somewhat paler, pronotum light red brown with disc often somewhat infuscated, or dark red brown, with margins and epipleura somewhat paler, elytra dark red brown, with first (suture) interval, lateral margins, and epipleura somewhat paler. Legs and first antenno-

meres reddish yellow, the second one very weakly, the remaining ones distinctly infuscated. Abdomen, mes- and metepisternum dark brown or blackish brown, rest of ventral surface somewhat paler.

Head (Figs 1-3): 0.78-0.80 (mean 0.79) times as wide as pronotum, with eyes fairly flat (head 1.33-1.37, mean 1.35 times as wide as head between eyes). Clypeus at apical margin weakly convex, weakly sinuate in front of anterior angle. Antennae moderately long, 2.26-2.52 (mean 2.34) times as long as pronotum and 0.84-0.88 (mean 0.86) times as long as elytra.

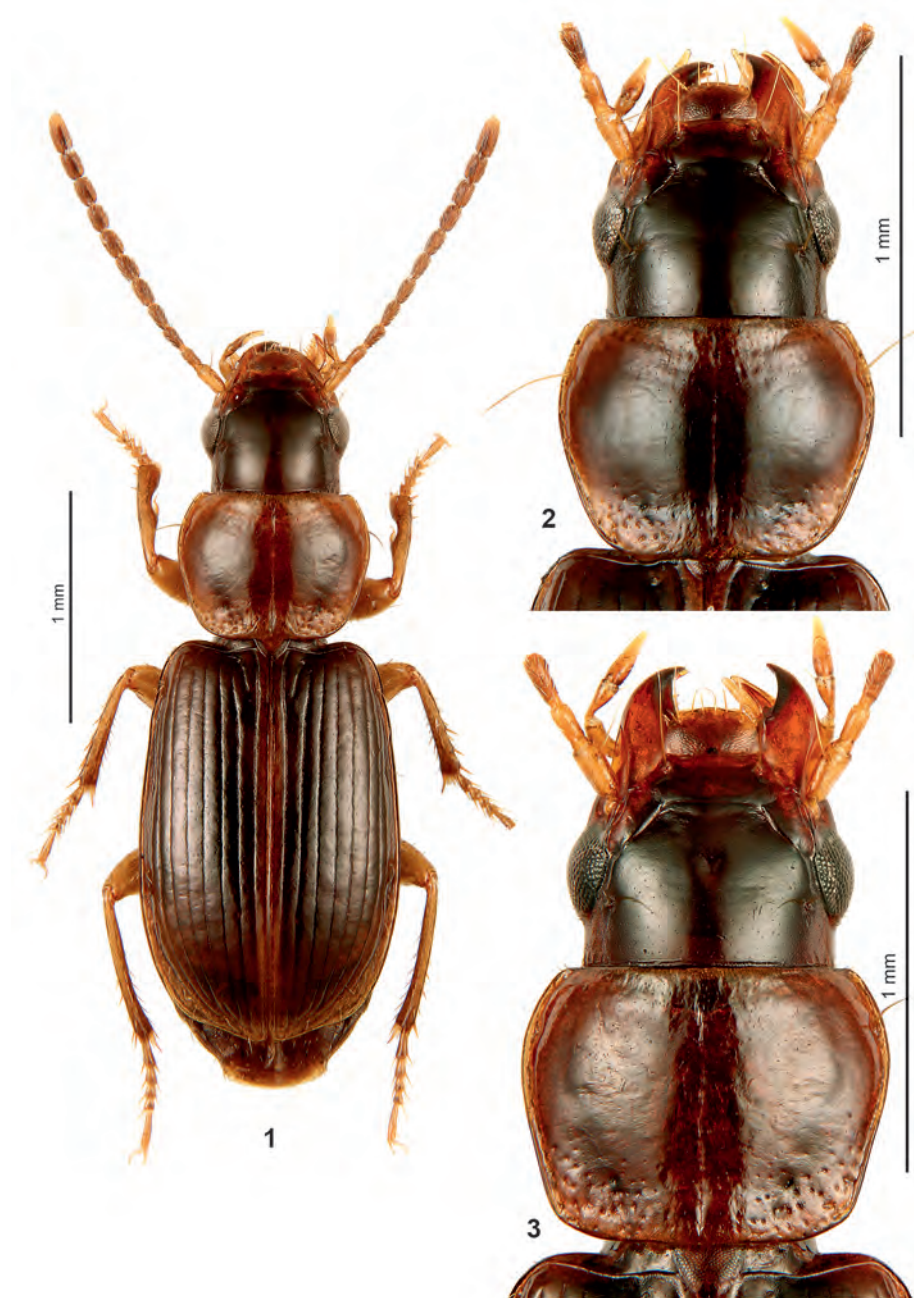
Pronotum (Figs 1-3) with surface distinctly convex, 1.27-1.36 (mean 1.31) times as wide as long, 1.25-1.28 (mean 1.27) times as wide as head, widest in about end of apical third, lateral seta inserted at about end of apical fifth. Apical margin weakly emarginate, anterior angles narrowly rounded at tips, weakly projecting forward. Sides convex in anterior half, gently convexly narrowed to the widely rounded posterior angles, in one female paratype (Fig. 3), less distinctly and almost rectilinearly narrowed to the posterior angles, which are weakly obtuse-angled, though also widely rounded at tip. Basal margin weakly convex throughout. Lateral edge and lateral furrows narrow, the latter somewhat widened posteriorly and fused with the latero-basal impressions. Latero-basal impressions wide, somewhat obliquely impressed, impressions and area of posterior angles with coarse punctures, between impressions almost smooth, or with some single, smaller punctures, or somewhat wrinkled. Median line or hardly reaching the margins. Anterior and posterior transverse impressions indistinct or only suggested.

Elytra (Fig. 1): Laterally behind widely rounded humeri weakly convex, distinctly widened posteriorly, somewhat drop-like, widest somewhat behind middle, 1.48-1.55 (mean 1.52) times as long as wide, 2.66-2.86 (mean 2.72) times as long and 1.34-1.43 (mean 1.38) times as wide as pronotum. Basal bead roundly turning into humerus, without humeral tooth. Elytral striae distinctly impressed and impunctate, scutellar striae long. Intervals comparatively flat, narrowed and somewhat convex at apex. Basal pore puncture at beginning of scutellar striae present, interval 3 in about middle of third quarter with one setiferous pore, adjoining stria 2.

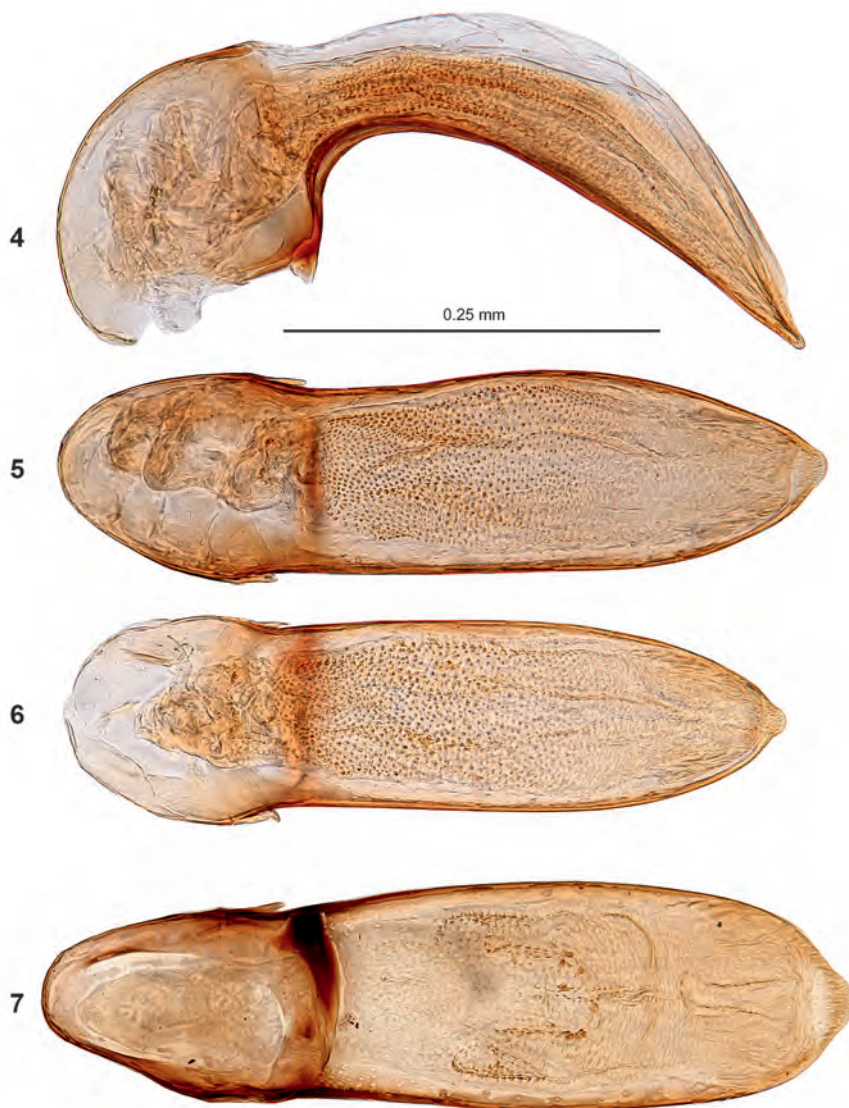
Ventral surface: Prosternum medially with about 20 short, erect, scattered setae, prosternal process with some few, short setae, irregularly inserted. Metepisterna elongate, ratio of internal margin/anterior margin (visible parts) about 1.42, strongly narrowed behind. Abdominal segments III-V medially (except obligatory setae) with some single short setae, last sternite in its middle part with about 30-40 scattered short setae, at apical margin on each side with 1 pore puncture bearing a long seta in males and with 2 pore punctures in females.

Legs: Normal for *Acupalpus* species. Males with protarsomeres 2-4 moderately, mesotarsomeres 2-4 weakly dilated, in each case tarsomeres 1-4 with biserially arranged adhesive scales ventrally.

Microsculpture: Distinctly visible only on labrum, clypeus, and scutellum, partly on dorsal surface of mandibles, frons, at sides posterior to eyes, consisting of isodiametric meshes. On vertex of head and disc of pronotum obliterated, on disc of elytra almost so, on lateral parts of pronotum and elytra only slight hints of transverse lines, confused and without forming meshes, in and around basal impressions with isodiametric meshes, weakly engraved and somewhat confused. In females on elytra apically very lightly impressed fine transverse lines visible.



Figs 1-3: *Acupalpus orszuliki* nov.sp. Habitus, head and pronotum. (1) Holotype; (2) Paratype, Turkey, Mardin env.; (3) Paratype, Syria, Homs env.



Figs 4-7: *Acupalpus*. Median lobe of aedeagus, dorsal and lateral aspect. (4-6) *A. orszuliki* nov.sp.; (4, 5) Paratype, Syria, Homs env.; (6) Holotype. (7) *A. suturalis* DEJEAN, 1829, Turkey, Yahyah, Ağcaşar Baranji.

Median lobe of aedeagus (Figs 4-6): Relatively short, in its middle part weakly widened, apical lamella short, somewhat button-like produced, rounded at tip (dorsal view), from its middle part towards apex almost rectilinear, apical lamella without capitulum (lateral view). Internal sac without spines, covered with microtrichia solely.

Intraspecific variability: See description.

Comparisons and Remarks: *A. orszuliki* nov.sp. is considered a member of subgenus *Acupalpus* by tarsomere 5 with one pair of ventro-lateral setae, antennomere 2 setose, mentum and submentum divided by a distinct suture. Within this subgenus it belongs to a large informal group of species, which are characterized by setose prosternum, immaculate elytra, and the small median lobe of aedoeagus without larger teeth or sclerites. In the Near and Middle East this group is represented by members of the *Acupalpus suturalis* group, comprising *A. suturalis* DEJEAN, 1829, *A. paludicola* REITTER, 1884, *A. schnitteri* JAEGER, 1999 and *A. turcicus* JAEGER, 1992, and besides by *A. luteatus* (DUFTSCHMID, 1812) and *A. exiguus* DEJEAN, 1829. *A. orszuliki* nov.sp. differs from most of these species by the strongly reduced microsculpture of head, pronotum and elytra, the different size, and/or construction of the median lobe and its internal sac structure. *A. suturalis*, which is very similar in its only suggested microsculpture of the superior surface, differs from the new species by the usually darker colour of upper surface, particularly of the pronotum, a different habitus, with elytra longer and subparallel, and humeri more distinct, instead of elytra shortly oval, somewhat drop-like, with less markant humeri; by at average larger body size, 3.0- 4.0 mm, and the construction of the median lobe which is similar, but in *A. orszuliki* nov.sp. not as strong widened apicad (Figs 5-6), but widest in about apical third (in *A. suturalis* stronger widened apicad, widest in about apical fourth, see Fig. 7).

In general appearance and colour of upper surface *A. orszuliki* nov.sp. is also similar to smaller specimens of *A. oliveirae* REITTER, 1884, and to smaller and paler specimens of *A. planicollis* (SCHAUM, 1857). However, these species occur further west in Balkan Peninsula (*A. planicollis*) or in NW Africa and the Iberian Peninsula (*A. oliveirae*), and have, in contrast to *A. orszuliki*, a distinct microsculpture on surface of head and pronotum, and a larger median lobe of aedoeagus with different shape of the apex. (for *A. oliveirae* see Figs 3a-e in JAEGER 1988: 243; for *A. planicollis* see Fig. 12 in JAEGER 2011a: 202).

Distribution: Up to now only known from a few specimens from S and SE Turkey close to the Syrian border and from W Syria, close to the Lebanese border. Due to its ability to fly a wider distribution of the species can be expected.

Habitat and bionomic notes: The specimens from the Hop Cecidi were collected in a wetland with a small creek, together with *Diachromus germanus* (LINNAEUS, 1758), and *Dyschirius* and *Bembidion* species, and interestingly syntopic with *A. turcicus*). The specimens from Mashta Al Hilv came from the bank of a small brook.

***Stenolophus (Egadroma) pseudoobockianus* FELIX & MUILWIJK, 2009**

Material examined: Iran: Balūchestān: Tis, loc. no. 150 6./7.IV.1973 (1 spcm, cMUILW). Būshehr: 30 km NNE Borāzjān, loc. no. 298, 18./19.IV.1977 (2 spcms., NMP, cMUILW). Fārs: Īstgāh-e Bāghebnāī-ye Mīān Jangal-e Fasā, loc. no. 223 Exped. Nat Mus Praha / S Iran, 30.V-5.VI.1973 (1 spcm., NMP). – Sivand vill., NE Shiraz, 30°06'N/52°50'E, 1770 m, 15.VI.2004, S. Kadlec leg. (1 spcm., NMP). – Bishapur Tang-e Chogan, loc. no. 234, 1050-1200 m, 10/11.VI.1973 (2 spcms., NMP, cMUILW). Hormozgān: 15 km NE Bandar-e Lengeh, loc. no. 313, 25./26.IV.1977 (2 spcms., NMP). – Kuh-e Genu, loc. no. 318, 27./28.IV.1977 (2 spcms., cMUILW). Sistān va Khūzestān: Pol-e Tang, loc. no. 284, 60 km NW Āndimeshk, 10./11.IV.1977 (2 exx. NMP, cMUILW). – Mollā Sānī, 45 km NW Ahvāz, loc. no. 288, 13./14.IV.1977 (1 spcm., NMP).

Note : Above mentioned material was collected with one exception by the members of the Czechoslovak-Iranian entomological expeditions 1973 and 1977.

The species was described from the United Arab Emirates and recently recorded for Oman (JAEGER et al. 2016: 1287). First record for Iran.

***Acupalpus (Ancylostria) morulus* REITTER, 1884**

Material examined: Lebanon : Mount Lebanon Governorate: Rayfoun, ca.33°58'N/35°42'E, mixed oak forest, ca 900 m, pitfall trap, IV 2015, Chr. Reuter leg. (1 ♀, cREUT). North Governorate: 2 km SW Bcharré, Baergacha, 5.V.2011, K. Orszulik leg. (1 ♂, cWR). Syria : Rif Dimashq Governorate: Bloudan, 30 km NW Damascus, 2.V.2011, M. Jüza leg. (1 ♀, cWR). Turkey : Şivas: Beypınarı, 1500/1600 m, 9.V.2011, P. Rapuzzi & G. Sama leg. (1 ♀, cWR).

Known from Israel, Iraq, Lebanon, Syria, and Turkey (WRASE 2009: 919). A species not common, hence new collecting data seems worth mentioning.

***Anthracus quarnerensis* (REITTER, 1884)**

Material examined: Lebanon : Beqaa Governorate: Nabatiye-Shtoura road, 33.452N 35.629E, 8.IV.2016, C. Reuter leg. (1 ♀, MFNB).

Known from southern Europe (Balears, France and Italy, Balkan Peninsula), Cyprus, Turkey, Syria and Israel. First record for Lebanon.

***Stenolophus* (s. str.) *steveni* KRYNICKY, 1832**

Material examined: Greece : Macedonia: Kilkís: Limni Doiránis [Dojran Lake], 12.VI.1988, H. Hebauer leg. (2 spcms., W. Marggi det., NMBE).

Widely distributed from Central and East Europe and the Balkan Peninsula to the Caucasus area, Near and Middle East to Middle Asia. First record for Greece.

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Zusammenfassung

Die Art *Acupalpus orszuliki* nov.sp. (locus typicus: Hop Geçidi, Mardin Umgebung, Mardin Provinz, Türkei) wird beschrieben. Der Habitus, Kopf, Pronotum und der Medianlobus des männlichen Genitals einschließlich des Feinbaues des Internalsacks werden abgebildet, die neue Art wird mit den anderen verwandten Arten verglichen. Drei Arten werden mit Neunachweisen gemeldet: *Stenolophus (Egadroma) pseudoobockianus* FELIX & MUILWIJK, 2009 für den Iran, *Stenolophus* (s.str.) *steveni* KRYNICKY, 1832 für Griechenland und *Anthracus quarnerensis* (REITTER, 1884) für den Libanon. Zusätzliche Fundortdaten werden für *Acupalpus (Ancylostria) morulus* REITTER, 1884 aufgeführt (Libanon, Türkei).

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Authors' addresses:

David W. WRASE
Dunkerstr. 78
D-10437 Berlin, Germany
E-mail: carterus@gmx.de

Bernd JAEGER
Zingster Str. 40
D-13051 Berlin, Germany
E-mail: acupalpus.bj@gmx.de